

# PRENTICE COMPUTER CENTRE

UNIVERSITY OF QUEENSLAND, ST. LUCIA, QUEENSLAND, AUSTRALIA. 4067.



## NEWSLETTER

N-250

14-Apr-80

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Authorized by the Director of the Computer Centre



## 1.0 WARNING - DO NOT INTERFERE WITH COMPUTER CENTRE EQUIPMENT

I have, until recently, been able to comment very favourably that, although we have equipment accessible in relatively unsupervised positions, our losses have been negligible and vandalism slight.

Terminals and other equipment are provided for authorized use by approved and registered users of the Centre. Any person who removes or interferes with the Centre's equipment in any way which is not necessary for its normal use, faces the possibility of severe disciplinary action in terms of the University Statutes as well as any action that would be appropriate by law.

Director  
extension 2189.

## 2.0 OPERATING RESULTS 1979

The number of user jobs processed in 1979 was 30% higher than for 1978. Batch work increased by 27%. Although the total number of batch jobs processed in 1979 was about the same as for 1978, more and larger jobs were processed at one-quarter rate. Low priority batch work increased by 49% and prime shift batch reduced by 17%. Terminal work increased by 20% and terminal jobs by 40%. This reflects a significantly higher number of smaller student jobs.

There was a 47% increase for Teaching and Research Departments over 1978 levels. Teaching and Research accounted for 23% of all batch usage and 48% of all terminal usage. Administration increased by 7%.

The highest proportional increase was from Griffith University where work from Schools increased by 164% and from Administration by 117%.

In 1979, 109 additional terminals were installed. Contract programming work for academic departments increased by 40% and hardware maintenance and development for departments was up by 55%. The number of training hours provided in vacation courses was double the 1978 level.

On the financial aspects of our operations, costs were 7.8% higher than for 1978. This is accounted for by C.O.L. salary increases and additional costs for Sunday operations and extended hours over normal shifts for end of semester peaks.

Revenue was lower by 1% as a result of significant reductions in internal charge rates in 1979. For the year's operation, the Centre recorded a loss of \$56,000 which was funded from past reserves.

Director  
extension 2189

### 3.0 ACTION PROPOSED 1980

In the first three months of 1980, we recorded an increase of 45% in number of jobs processed as compared with a similar period in 1979. Peak usage has increased significantly. Whereas in 1978, the highest peak of logged-in user jobs was 65, the corresponding peak in 1980 was 105 logged-in user jobs.

It is clear that a third shift of operations should be introduced and we are aiming at a target date of 28 April. It is proposed that major batch work on the KL will be processed in third shift and that the period from 6 pm to 11 pm in second shift will provide a high response terminal service as well as the processing of smaller batch jobs with reasonably fast turnaround.

An additional 256,000 words of core memory is scheduled for installation on the KL 1090 system by mid-year. Although this will provide additional job slot capacity and reduced swapping overhead, it will barely keep pace with the additional number of terminals recently installed and to be installed in departments.

The way that the PDP10 operating system handles communications is not very efficient and adds to CPU overhead. DEC are scheduled to release a new operating system with improvements in this area by June. However, it is clear that, although this provides some increase in efficiency, it does not meet all of our requirements and we must devote some additional resources for this in 1980.

Improvements have been made in the SLOTS operating system. The number of jobs available for users have increased by reducing the number of operator jobs and by increasing the amount of core available to users. Although the SLOTS system will be available from 8.15 am to 5.45 am, Monday to Friday and Sunday, 9 am to 5 pm, we are still not in a position to provide unattended operation during other periods.

Director  
extension 2189

#### 4.0 TELECOM NETWORK - NON-APPROVED TERMINAL DEVICES

The Australian Telecommunications Commission has established rigorous standards regarding the types of devices which may be connected to data lines. Each such device is provided with an approval to connect by Telecom. This is not a bureaucratic constraint but is aimed primarily at preventing injury and loss of life as a result of defective power supplies. Thus, only Telecom approved devices may be attached to the network.

Terminals purchased and installed by the Centre are type approved. However, most micro-computer systems are not type approved. An approval to connect may be obtained from Telecom for such systems by using a Telecom approved hazardous voltage isolator (cost around \$300 to \$400).

Please contact Graham Rees, telephone extension 3288, if you have any queries or require details regarding the applications procedure for currently non-approved devices.

Director  
extension 2189

#### 5.0 MODIFIED POLICY ON THE USE OF ACOUSTIC COUPLING EQUIPMENT

It has now been decided to lift the current restriction on the use of Telecom permitted acoustically coupled equipment at permanent locations. However, it will still be a requirement to have a hard-wired modem at the in-station (computer terminal).

In changing the policy, it is necessary that potential users be aware of the likelihood of a degraded service provided by such devices.

It is a requirement in the permit that the supplier shall not deliver the apparatus to any person for use in conjunction with the Telecom network unless that person's application has been approved in writing by the State Manager, Telecom in the state concerned. In approving the use of the equipment, the customer will be advised by letter of the possible degraded service provided and the maintenance procedures.

There is also a condition in the permit which requires the supplier to advise the State Manager in the State concerned within 14 days of the date of supply, the name and address of each person to whom the apparatus is supplied.

For any further details on the change, please contact Mr. B. Peatt (Telecom Australia) on telephone 03-630 5237.

## 6.0 A NEW VERSION OF MULTIVARIANCE (NYBMUL)

The latest version of this multivariate analysis of variance and covariance package, has been installed on the system.

Among the enhancements to the system are:-

- screening of input data according to range limits or missing value codes
- options to allow recoding of factor levels from value ranges rather than explicitly coding the levels 1,2,...,J and to label factor levels
- features to facilitate the analysis of repeated measures data
- a table is now provided giving multivariate results for each between group effect, to parallel the univariate estimates and tests produced by earlier versions of MULTIVARIANCE
- a VARIMAX rotation routine has been added for application to subsets of principal components of the correlation/covariance matrix or to the canonical correlation loadings.

The package has been reworked internally in some areas with the result that it should use less core and be overall, cheaper to run. Instead of the fixed 4000 locations available in the old version for workspace for the problem, this version allows the user to specify how many locations are needed for the run.

Parameter cards are compatible with those of the old version except the factor identification, estimation specification and analysis selection cards. These changes are conestic, usually involving just changes to the column numbers in which options are indicated.

A copy of the new manual is held for reference at the Batch Station in the Hawken Building. Further copies for sale, are on order.

Running instructions for the program have changed somewhat, the user being asked for the names of the input and output files, and the number of words to allocate for workspace. Experience will give a better idea of what is appropriate value for this last parameter. It obviously depends on the design and analysis wanted. If in doubt, 4000 should be sufficient for most analyses.

e.g.

```
.RUN STA:MULTIV
  what is the name of the input file?  RUN1.DAT
  what should the output file be called?  RUN1.LST
  enter the value of param:  4000
  :
```

.PRINT RUN1.LST

Unlike its predecessor, this version deletes its scratch files on finishing, and there is no need to use the ASSIGN commands before running it. A slightly expanded set of running instructions can be obtained by typing on a terminal

.HELP MULTI

The old version, known as NYBMUL, will probably remain on the system until the new manuals arrive.

Chris McGovern  
extension 3391

## 7.0 COURSES FOR CURRENT AND INTENDING USERS

The Staff of the Centre are currently preparing courses for the remainder of first semester 1980. All courses offered are user-oriented, providing sufficient information, instruction and practice to allow users to perform the kinds of operations contained within the packages.

N.B. For users with no knowledge or experience of the DEC-10 system, an introductory course is provided. For all new users, attendance at all other courses is dependent upon satisfactory completion of this introductory course (or demonstration of the appropriate skills).

To ensure that this condition does not prevent intending participants of other courses from enrolling in such courses of their choice, introductory courses will be available well in advance of other courses to permit completion of this requirement.

Staff conducting all other courses will assume that all participants are familiar with the content of the introductory course.

Intending participants of other courses who, for various reasons, may feel a need for a "refresher" course are welcome to attend the introductory course.

Introductory Course May 12-13: 9 a.m. - 12 noon & 2 p.m. - 5 p.m.

This two-day course is concerned with fundamental ideas and skills - to make participants aware of the elements and general features of computer systems; to familiarize participants with the broad operation, structure and administration of the DEC-10 system at the Centre; to give sufficient practical experience of basic commands and general procedures (including simple edit commands) for the user to be able to begin to apply the details of other specific packages.

Please note: (1) To ensure that all participants obtain sufficient terminal practice, enrolments will be limited.

(2) If necessary, other sessions of the Introductory Course will be arranged, depending on demand. Users needing to attend the introductory course, but unable to attend on May 12-13, should contact Barry Maher on extension 3022.

#### 8.0 COURSES FOR JUNE

Beginning 9 June, courses will be available in the following areas:

- (i) 1022 Data Base Management System
- (ii) Introduction to FORTRAN Programming
- (iii) Statistical Package for the Social Sciences.

Details of these courses will be available in the next Newsletter.

#### 9.0 LIBRARY NEWS

A new version of IMSL-(V7) will be placed on STA: on the KL at the end of April. Changes have been made to the sources of the following subroutines :-

ASNKMC	DGEAR
EIGZF	GGUBFS
GGUBS	GGUW
GGVCR	LLSQF
LSVDF	MERF=ERF
MMBSK0	MMBSK1
MMBSYN	MMDEI
NRWMD	VBLA=DROTMG
VBLA=SROTMG	

For further information please contact the program librarian.

Donnie Marshall  
extension 3943